No. 818,834. PATENTED APR. 24, 1906.

I. P. LAMBING.

GOLD SAVING APPARATUS.

APPLICATION FILED MAY 1, 1905.

Fig. 1.

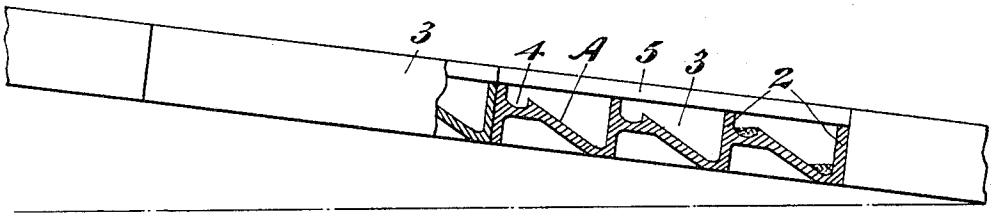


Fig. 2.

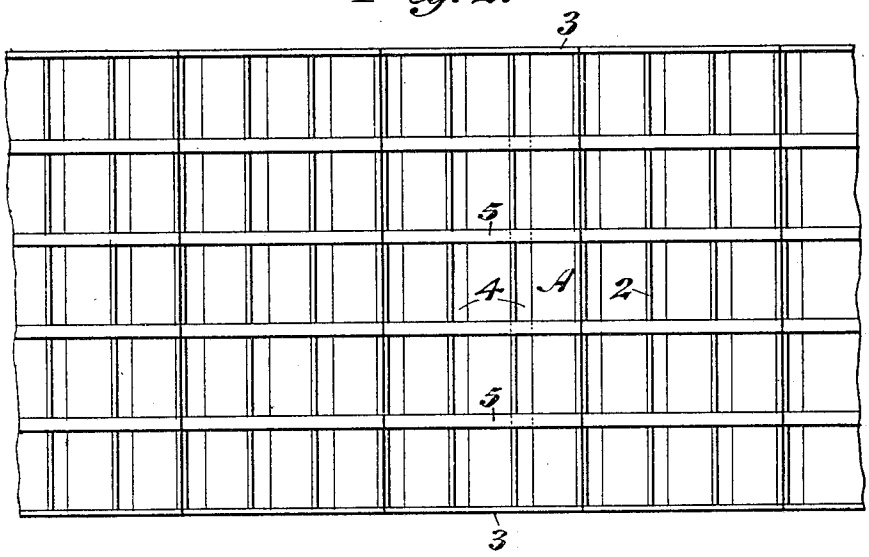
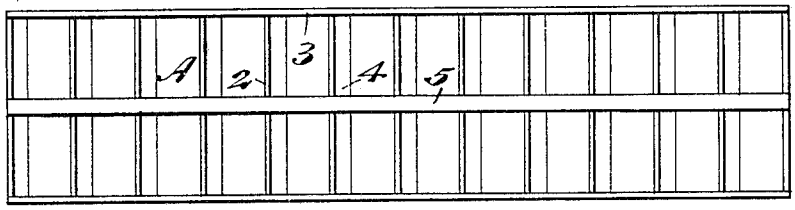


Fig. 3.



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UNITED STATES PATENT OFFICE.

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GOLD-SAVING APPARATUS.

No. 818,834. Specification of Letters Patent. Patented April 24, 1906.

Application filed May 1, 1905. Serial No. 258,343.

To all whom it may concern:

Be it known that I, ISAAC P. LAMBING, a citizen of the United States, residing at Denver, in the county of Denver and State of Colorado, have invented new and useful Improvements in Gold-Saving Apparatus, of which the following is a specification.

My invention relates to a device for saving gold in placer, gravel, or hydraulic mining where free gold is to be found.

It consists of a riffle or riffles fixed transversely in the sluice and having peculiarly-arranged containing depressions for quicksilver.

It also comprises a combination of parts and details of construction which will be more fully explained by reference to the accompanying drawings, in which—

Figure 1 is a side elevation, partly in section, of my apparatus. Fig. 2 is a plan view of same. Fig. 3 is a modified form of same.

In the drawings I have shown a section of my improved riffle which is composed of successive inclined surfaces with intermediate raised bars or riffles having a quicksilver-containing box upon either side of said bars, one of said riffles being located at the bottom of each incline and the other at the top and contiguous with the riffle-bar.

A represents the inclined surfaces of my improved riffle. These stand at a considerable angle, as shown, and from the lowest part of each of these inclines rises a bar or riffle 2. These bars extend transversely of the sluice, filling the full space, and may be connected with the sides of the sluice or with independent sides, as at 3, which may be cast or otherwise formed with the riffle.

At the upper edge of each incline and between it and the adjacent transverse bar is a portion 1, arranged substantially at right angles to the bar or riffle and which connects the top of the inclined portion with an intermediate portion of the adjacent bar or riffle, the upper surface of said right-angled portion 1 being provided with a groove or channel, as at 4. This channel lies between the upper edge of the incline and the bar, and a body of quicksilver may be placed in each of these grooves and will extend from side to side of the sluice. Quicksilver may also be placed in the lowest portion or depression formed at the junction of the lower edges of the inclined surfaces and the vertically-disposed bars. Across the tops of these bars and extending lengthwise of the sluice are the bars 5, resting upon the tops of the bars 2. These bars 5 serve to carry off any rocks or large material which it is not desirable to have reach the lower part of the riffle, and by reason of their substantially straight and smooth surface the rocks and larger material will roll or slide along these bars and be discharged without falling into and clogging these riffles. These riffles may be used in sluices having a very considerable incline or grade, and the passage of the material through and over them with a plentiful supply of water causes a constant boiling or agitation, and the gold will be deposited in each of the transverse channels containing the quicksilver where there is less current and agitation.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a gold-saving apparatus, a sluice, a structure contained therein consisting of a succession of walls arranged substantially at right angles with the plane of the sluice, intermediate inclines having a steeper inclination than that of the sluice, transverse mercury-containing channels at the top of each incline and below the top of the walls, and other channels at the junction of the inclines with the bases of the walls.

2. In a gold-saving apparatus, an inclined sluice, a riffled bottom therefor, said bottom consisting of a succession of surfaces having an inclination greater than that of the sluice, intermediate transverse dams arranged substantially at right angles with the plane of the sluice, mercury-containing channels at the junction of the lower edges of the inclines and the dams, and other mercury-containing channels at the upper edges of the inclines and below the tops of the dams to receive the vertical fall therefrom.

3. In a gold-saving apparatus, a means for separating gold from associated mineral, said means consisting of a sluice having a bottom composed of a series of rapid inclines and intermediate dams arranged substantially at

right angles with the plane of the sluice, with mercury-containing channels at the junction of the lower edges of the inclines and the bases of the dams, and other mercury-containing channels located between the upper edges of the inclines and the faces of the dams and below the upper edges of the dams.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ISAAC P. LAMBING.

Witnesses:
D. S. MORRISON,
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